



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

## REPORTS OF ASSURANCE COMPANIES.

*National Life Assurance Society.—Report of the Receipts and Payments for the Year ending 31st December, 1853.*

	£.	s.	d.
Balance in hand 1st January, 1853 . . . . .	4,075	7	2
Premiums :—			
On assurances renewed . . . . .	33,424	15	0
Commuted on policies 56, 195, 415, 975 . . . . .	725	8	5
On policies issued during the year 1853 . . . . .	4,122	18	0
Commuted premiums on ditto . . . . .	752	4	9
Additional for error in age, policy 1,012 . . . . .	67	4	2
Extra for various foreign risks . . . . .	705	3	10
	39,797	14	2
Sale of £18,800, New 3½ per Cents. . . . .	18,912	0	0
Ditto 26,000, Consols . . . . .	25,932	10	0
Loans paid off—			
Mortgages . . . . .	10,242	17	2
On policies of the Society . . . . .	1,470	0	0
On ditto, with collateral security . . . . .	250	0	0
	11,962	17	2
Interest on mortgages, and dividends on stock . . . . .	10,358	10	4
Received for interest and premiums in advance . . . . .	3,069	1	8
" for policy stamps, up to 10th October . . . . .	183	15	0
" for bond stamps . . . . .	6	13	9
Commission on reinsurances . . . . .	23	13	5
Loan on security of Consols . . . . .	15,200	0	0
	£129,522	2	8
Amount allowed to the members in reduction of premiums this year . . . . .	9,856	18	10
Purchase of £1,000 per annum, Long Annuities . . . . .	5,312	10	0
" £565 " Annuities for terms of Years . . . . .	3,142	16	3
" £3,000, 6 per cent. Canada Government Debentures . . . . .	3,457	10	0
" £5,000, 5 ditto ditto . . . . .	5,156	5	0
" £10,000, Southampton Dock Bonds . . . . .	10,000	0	0
" £5,000, Stockton and Darlington Railway Bonds . . . . .	5,006	5	0
Loans on mortgage . . . . .	£32,700	0	0
" on policies of the Society . . . . .	6,760	7	4
Ditto, with collateral security . . . . .	9,930	0	0
Temporary loan . . . . .	3,000	0	0
	52,390	7	4
Paid claims on policies :—Outstanding, 1st January, 1853 . . . . .	£8,250	0	0
Claims arising in 1853 . . . . .	18,223	14	7
	26,473	14	7
Purchase of policies . . . . .	539	3	5
Agencies . . . . .	329	0	7
Fees to directors, auditors, and medical officers . . . . .	936	5	0
Office salaries . . . . .	1,470	0	0
Painting premises . . . . .	174	14	5
Messenger, postages, printing, advertising, stationery, &c. . . . .	516	9	5
Annuity to late Secretary . . . . .	300	0	0
Law charges . . . . .	44	12	6
Rates and taxes . . . . .	137	5	11
Income and property tax . . . . .	362	17	4
Paid for policy and bond stamps . . . . .	128	1	9
Premiums for reinsurances . . . . .	522	5	10
Allowances for premiums and extra premiums overpaid . . . . .	733	19	6
Balance in hand, 31st December, 1853 . . . . .	£2,155	10	2
Interest due, but not yet paid . . . . .	375	9	10
	2,531	0	0
	£129,522	2	8

*Statement of Property belonging to the Society, and the Income arising therefrom.*

	Property.			Income.		
	£.	s.	d.	£.	s.	d.
New 3½ per Cent. Stock . . . . .	37,300	0	0	1,212	5	0
Consols . . . . .	52,132	6	9	1,563	19	9
Government Annuities, £1,565 per annum . . . . .	8,455	6	3	380	9	5
Five per cent. Canada Government Debentures . . . . .	5,000	0	0	250	0	0
Six per cent. ditto ditto . . . . .	8,000	0	0	480	0	0
Loans secured by mortgages, bonds, and debentures . . . . .	183,476	8	6	7,386	19	4
<hr/>						
Annual income from the above investments . . . . .				11,273	13	6
Cash balances, as above . . . . .	2,155	10	2			
Policy stamps on hand . . . . .	159	4	6			
Freehold premises in King William Street . . . . .	7,100	0	0			
Amount of annual premiums . . . . .				37,315	1	4
<hr/>						
				£48,588	14	10

*A General Statement of the Affairs of the National Life Assurance Society, estimated on the 31st December, 1853, as up to 25th March, 1854.*

	£.	s.	d.
Present value of £1,057,959 assured on lives of members, less re-insurances . . . . .	545,929	18	10
Present value of non-members' policies, less reinsurances . . . . .	6,586	14	5
Claims admitted, but not yet paid . . . . .	8,791	16	2
Reserve for possible claims between 1st January and 25th March, 1854 . . . . .	15,000	0	0
Reserve for salaries, fees, and outstanding accounts . . . . .	1,400	0	0
Loan on security of Consols . . . . .	15,200	0	0
	£592,908	9	5
<hr/>			
Capital:—	£.	s.	d.
New 3½ per Cents, £37,300 . . . . .	36,181	0	0
Consols, £68,132. 6s. 9d. . . . .	64,725	14	5
Long Annuities, £1,000 annuity . . . . .	5,312	10	0
Annuities for Terms, £565 annuity . . . . .	3,142	16	3
Five per cent. Canada Government Debentures, £5,000 . . . . .	5,000	0	0
Six per Cent. ditto, £8,000 . . . . .	8,800	0	0
Loans secured by mortgages, bonds, and debentures . . . . .	183,476	8	6
Premises in King William Street . . . . .	7,100	0	0
Policy stamps on hand . . . . .	159	4	6
Cash balances . . . . .	2,155	10	2
	316,053	3	10
Various sums payable to the Society before 25th March, 1854 . . . . .	5,000	0	0
Present value of £8,303. 12s. 1d. annual premiums, which members not yet entitled to reduction will pay in full . . . . .	21,841	8	3
Present value of £33,922. 4s. 10d., amount of annual premiums on members' policies, less reinsurances . . . . .	£425,089	12	0
Less value of amount to be paid in full, as above . . . . .	21,841	8	3
	403,248	3	9
Present value of amount, subject to reduction . . . . .	153,234	6	5
Thirty-eight per cent. reduction thereon . . . . .			
	250,013	17	4
	£592,908	9	5

1855.]

*Reports of Assurance Companies.*

173

*Palladium Life Assurance Society.—Capital and Assurance Account,  
December 31, 1853.*

<i>Dr.</i>	£.	s.	d.
Paid-up capital and additions . . . . .	74,962	12	3
Reserve fund . . . . .	12,377	15	5
Provision for outstanding risk on assurances . . . . .	286,876	8	7
Dividends due . . . . .	3,268	0	4
	<hr/>		
	£377,484	16	7
<i>Cr.</i>	£.	s.	d.
Mortgage investments . . . . .	254,295	0	1
Government securities . . . . .	30,144	16	4
Annuity investments . . . . .	14,580	12	7
Advances on policies and bonds . . . . .	39,355	0	0
India transfer loan, and Palladium stock . . . . .	13,455	13	10
Estimated value of house and fixtures . . . . .	4,530	0	0
Amount at debit of agents . . . . .	£1,985	10	2
Premiums otherwise outstanding . . . . .	1,970	7	4
	<hr/>		
	3,955	17	6
Cash at London and Westminster Bank, on deposit, and in current account . . . . .	17,167	16	3
	<hr/>		
	£377,484	16	7

*Transactions of the year 1853.*

<i>Dr.</i>	<i>Receipts.</i>	£.	s.	d.
Balance of assets from previous year . . . . .		373,625	18	7
Premiums . . . . .		44,214	12	0
Commission on reassurances . . . . .		197	10	10
Interest . . . . .		16,411	17	11
Proceeds of reassurances cancelled . . . . .		135	0	0
Transfer fines . . . . .		11	5	0
		<hr/>		
		£434,596	4	4
<i>Cr.</i>	<i>Payments.</i>	£.	s.	d.
Claims settled in the course of the year . . . . .		42,184	2	1
Returns on surrender of policies . . . . .		1,131	8	10
Premiums on reassurances . . . . .		3,726	0	11
Charges, including agencies and medical reports . . . . .		5,208	16	8
Commission . . . . .		1,535	19	3
Proprietors' dividends . . . . .		3,325	0	0
Balance (assets) invested as above . . . . .		377,484	16	7
		<hr/>		
		£434,596	4	4

Number of new policies issued in the year, 139. Amount assured, £128,849.

New premiums, £4,159. 11s. 3d.

	£.	s.	d.
Amount under assurance 31st December, 1853 . . . . .	1,349,479	14	9
Ditto 1852, as in last report . . . . .	£1,280,198	19	7
Bonus added on completion of valuation . . . . .	53,243	14	5
	<hr/>		
	1,333,442	14	0
Increase at close of 1853 . . . . .	£16,037	0	9
	<hr/>		
Balance of assets, 1853 . . . . .	£377,484	16	7
Balance of assets, 1852 . . . . .	373,625	18	7
	<hr/>		
Increase in 1853 . . . . .	£3,858	18	0

VOL. V.

N

*Provident Clerks' Mutual Life Assurance Association (Benevolent Fund).*—*District Meeting at Liverpool, May, 1852.*—From the deputy chairman's address it appeared that they had 101 assurers in the town of Liverpool, to the amount of £29,850, and eight subscribers to the benevolent fund. Since their last meeting, in 1849, they had only added 32 policies to the number which then existed. In the assurance department the Society, up to the 31st March, 1852, had issued 3,168 policies, amounting to £614,390, some of which, of course, had dropped. The amount invested in stock and mortgages was upwards of £42,000, and the amount of annual premiums on existing assurances upwards of £16,000.

*The Provident Clerks' Mutual Life Assurance Association and Benevolent Fund.*—Since the establishment of the Association, to the 31st December, 1852, 3,471 life policies had been issued, assuring £673,140; and there remained in force at the same period 2,852 policies, covering assurances to the amount of £556,436.

The state of the Society on the 31st December was as follows, viz.:—

Liabilities for the—	£.
Values of 2,756 policies under Table A 1 . . . . .	33,728
„ 201 policies under other tables . . . . .	9,295
Value of declared bonuses (1848) . . . . .	420
<b>Making the total liabilities . . . . .</b>	<b>£43,443</b>
Assets as per account . . . . .	50,565
<b>Balance, net profit for division . . . . .</b>	<b>7,122</b>
One tenth assigned to the benevolent fund . . . . .	712
<b>Remainder, applicable for bonuses to members . . . . .</b>	<b>£6,410*</b>

If the division be confined to assurances of three or more years' standing, effected under Table 1, the sum required to give a bonus of 12s. per cent. per annum would be £5,370. 2s. 3d., and the proportionate reserve to be made for assurances effected during the last three years would be £973. 5s. 7d., making together £6,343. 7s. 10d.; and it was therefore recommended that a bonus, at the rate of 12s. per cent. per annum, should be declared on all policies entitled to participate therein.

*Statement of Assets and Liabilities, 31st December, 1852.*

	Assets.	£.	s.	d.
£35,500 stock, 3½ per Cents, cost . . . . .		33,932	4	1
Amount lent on mortgage . . . . .		11,050	0	0
Lease of house, furniture and fixtures . . . . .		572	18	5
Cash at Bank of England . . . . .		2,041	7	8
Petty cash on hand . . . . .		0	10	7
Balance due by agents . . . . .		1,072	12	6
Policy stamps on hand . . . . .		61	0	0
Loans to members on security of their policies . . . . .		520	19	0
Balance due by benevolent fund . . . . .		75	17	4
Renewal premiums due in December, 1852 . . . . .		1,047	0	0
Quarterly and half yearly premiums . . . . .		1,425	6	1
Interest accruing on £35,500 stock, £11,050 mortgages, and £520. 19s. loans to members, up to 31st December, 1852 . . . . .		420	3	5
Premiums due on policies on the half credit system . . . . .		45	3	0
		<b>£52,265</b>	<b>2</b>	<b>1</b>

\* Equivalent to a reversionary bonus of over £13,800.

	<i>Liabilities.</i>	£.	s.	d.
Values of 2,756 policies, assuring £534,871 under Table A 1 . . . . .		33,727	8	11
„ 74 policies, assuring £12,248 under Table A 2 (Endowment Assurances) . . . . .		2,293	11	8
Values of 51 policies, assuring £914 under Tables B 1 and B 2 (Deferred Annuities, premiums returnable and not returnable) . . . . .		2,233	0	0
Values of 37 policies, assuring £3,980 under Tables C 1 and C 2 (Endowments, premiums returnable and not returnable) . . . . .		862	0	0
Value of £424 per annum, Annuity Table D . . . . .		3,688	7	8
Values of 23 policies under other tables, assuring £9,348 . . . . .		217	16	1
Value of reversionary bonuses accepted at the last valuation (£807. 10s.) . . . . .		420	0	0
Claims admitted in 1852, but not due till 1853 . . . . .		1,700	0	0
Profit for division . . . . .		7,122	17	9
		£52,265	2	1

*Scottish Amicable Life Assurance Society (Established 1826).—Report by the Ordinary Directors to the Annual Meeting, 20th March, 1851.*—The amount of capital sums assured during 1850 has been £356,367, by 944 policies, and corresponding premiums £12,273. 0s. 8d. —the net increase to the total capital sums assured, deducting for policies emerged, forfeited, surrendered, and not taken up, being £272,354. 9s., by 809 policies, and corresponding net increase of premiums £8,764. 15s. Besides, there has been received, of single premiums for assurances and annuities, £4,962. 12s. 9d.

The rate of mortality during the year has not been so much as one per cent.; but from the falling in of some heavy policies, the per centage of claims considerably exceeds the per centage of deaths amongst the members. Among the many who have been assured through the Office in London, not one death has occurred since its opening, 18 months ago.

Local boards have been established in Dublin and Aberdeen.

Amount of assurances in force, £1,371,700. Present annual income, £55,500. Accumulated fund, £270,500.

*Scottish Amicable Life Assurance Society.—Report by the Ordinary Directors to the Annual Meeting, 18th March, 1852.*—The new business for the year 1851 has very considerably exceeded that of 1850.

New business in	No. of Policies.	Sums assured.			Corresponding premiums.		
		£.	s.	d.	£.	s.	d.
1850 ..	944 ..	356,367	0	0	12,273	0	8
1851 ..	1,079 ..	444,170	17	0	16,345	7	2

The net addition to the total business, after deducting for all policies emerged, forfeited, surrendered, and not taken up, for the two years, being—

Net addition.	No. of Policies.	Sums assured.			Corresponding premiums.		
		£.	s.	d.	£.	s.	d.
1850 ..	809 ..	272,354	9	0	8,764	15	0
1851 ..	882 ..	368,051	4	0	13,103	8	9

The premiums above stated are exclusive of the single premiums for assurances and the single and annual premiums for annuities.

The amount of claims is positively less than it has been for many years, notwithstanding the augmented business and advancing age of the earlier members. The per centage of claims is only about 14s. per £100, or about £1 out of £143. The next periodical investigation into the affairs of the Society takes place at the close of next year.

Amount of assurances in force, £1,739,750. Present annual income, £70,000. Accumulated fund, £313,100.

*The Standard Life Assurance Company (1825).—Business for the Year ended 15th Nov., 1853.*

Number of proposals for assurance made to the directors . . . . .	1059
Number of assurance policies issued, exclusive of annuity and other transactions . . . . .	875
	£. s. d.
Sums proposed for assurance . . . . .	555,544 7 0
Sums in policies issued . . . . .	455,248 17 1
Premiums on new policies, exclusive of single payments . . . . .	14,886 9 3
Annual revenue at 15th November, 1853 . . . . .	205,035 6 2
Claims by death, exclusive of bonus additions . . . . .	84,445 17 0
Addition to accumulated fund during the year . . . . .	125,761 1 10

*Results of the Business during the last Nine Years.*

Number of proposals for assurances made to the directors . . . . .	8,351
Number of assurance policies issued, exclusive of annuities and other transactions . . . . .	6,608
	£. s. d.
Sums proposed for assurance . . . . .	5,000,498 12 4
Sums in policies issued . . . . .	3,961,215 17 3
Claims by death paid, exclusive of bonus additions . . . . .	491,210 14 4

*Victoria Life Assurance Company (1838).—Extract from the Fourteenth Annual Report of the Directors, submitted to the General Meeting of Proprietors on the 10th March, 1853.*—The receipts of the past year were £36,205. 14s., and the disbursements £19,260. 6s. 8d., leaving a balance in favour of the Company of £16,945. 7s. 4d., which has been carried to the general or assurance fund. New assurances were effected under 164 policies, amounting to nearly £108,000, adding in premiums over £3,700 a year to the income of the Company. The claims by death arise from the failure of 15 lives under 18 policies, and amount to £11,237. 9s. 11d., including bonuses. The number of policies lapsed during the past year, by death, purchase, or otherwise, amounts to 123, assuring £73,246, and have produced in premium nearly £10,000, within £1,200 of the amount paid for claims by death. The assets of the Company now amount to over £150,000, and are profitably invested, the much larger proportion in mortgages, reversions, life interests, debenture bonds, and consols. The number of policies in force at the end of the year were 1,155, assuring £763,642, the income being over £35,000 a year. Up to the end of 1852, 2,545 policies had been issued, assuring over one million six hundred thousand pounds.

*Victoria Life Assurance Company.—Fifteenth Annual and Second Septennial Report of the Directors, 30th March, 1854.*—During the past year, 142 policies have been issued, assuring £107,022, and adding nearly £4,000 to the income of the Company. The total receipts were £35,395, and the payments £14,968, (including £6,953, claims by death,) leaving £20,427 to be carried to the general or assurance fund—a larger sum than has hitherto been carried to that fund in any one year. A most careful investigation of the assets and liabilities of the Company has been made by the actuary; each policy has been separately valued; the future profits of the business have in no way been anticipated; and, after making a proper reserve to protect the interests of those assurers who have come in during the last three years, but who will not on this occasion participate in the division, and allowing fully for all contingencies, the result is as follows:—

	£.	s.	d.
The assets are valued at . . . . .	176,861	7	2
The liabilities at . . . . .	144,376	13	4
Leaving a surplus for division of . . . . .	£32,484	13	10

more particularly set forth in the following table:—

<i>Liabilities.</i>		£.	s.	d.
Value of £815,171, assured under 1,190 policies, including reserve for annuities and accounts unpaid, extra risks, and other contingencies	}	100,844	9	4
Proprietors' fund . . . . .		34,109	7	6
Claims unpaid . . . . .		4,275	13	6
Value of £518 per annum, annuities granted . . . . .		5,147	3	0
		144,376	13	4
Balance—surplus for division . . . . .		32,484	13	10
		£176,861	7	2
<i>Assets.</i>		£.	s.	d.
Three per Cent. Consols . . . . .		24,876	1	6
On mortgage . . . . .		29,750	0	0
On life interests and reversions . . . . .		21,301	14	3
„ railway and other debentures . . . . .		35,463	18	9
„ the Company's policies . . . . .		3,841	0	0
„ bonds with policies of assurance . . . . .		38,261	13	2
„ deposit (London and County Bank) . . . . .		5,000	0	0
Due by agents . . . . .		897	13	4
Cash at bankers . . . . .		6,723	15	11
Annuities and reversions purchased, lease of premises, profit rent, &c. . . . .		3,745	10	3
Premiums on credit, and premiums and interest payable but not due . . . . .		7,000	0	0
		£176,861	7	2

Of this surplus, the directors advise that £32,266 should be divided in terms of the deed of settlement: viz., four fifths to the assured entitled to participate, and one fifth to the shareholders. This will enable the directors to declare a bonus of 17s. 6d. a share to the proprietors, which they recommend should be thus appropriated—by the addition of 7s. 6d. a share to the paid-up capital (making, with the former bonus of 12s. 6d. a share, £1 a share added to the original capital, equal to £25 per cent. thereon), and the remaining 10s. a share the directors propose should be paid to the proprietors in cash. The reversionary bonuses to the assured will average 53 per cent. on the amount of premiums paid, and 11½ per cent. on the sums assured by them. The present value of this bonus may be received in cash, or may be applied to the reduction of future premiums. It may, perhaps, be interesting to mention, that since the establishment of the Company 2,689 policies have been issued, assuring £1,714,524; that 1,499, assuring £903,812, have lapsed from one cause or another; and that 1,190 policies, assuring £810,712, remain on the books. £260,016 has been received in premium, and £44,634 in interest. The claims by death have arisen from the failure of 133 lives, assured under 169 policies, assuring £87,867; while the premiums received on these, on purchased and other lapsed policies, have amounted to £89,135. The directors proposed a division of profits in future every five years, instead of every seven years, and the power of having a less number of directors and auditors than the deed of settlement now provides for.



Examples of bonus declared 1854:—

Age when Assured.	Sum Assured.	Reversionary Bonus now added.	Sum now Assured.	Amount of Premiums paid.	Per Centage of Bonus on Premiums paid.	Per Centage of Bonus on Sum Assured.
	£.	£.	£.	£.		
29	500	75	575	120	62·5	15·
35	1,000	162	1,162	283	57·24	16·2
43	1,000	179	1,179	365	49·	17·9
51	1,000	207	1,207	477	43·4	20·7
58	1,000	253	1,253	644	39·3	25·3

## INSTITUTE OF ACTUARIES.

As on the last occasion, we publish the questions for the Second Year's Examination, which we understand has, on the whole, been very satisfactorily met. The third year's examination will take place for the first time in December, 1855.

### SECOND YEAR'S EXAMINATION, 1854.

1. Explain the difference between common and Naperian logarithms, and why it is desirable to retain both systems.

2. Given  $\log. n = M \left\{ (n-1) - \frac{1}{2}(n-1)^2 + \frac{1}{3}(n-1)^3 - , \&c. \right\}$  where

$M$  is the modulus of the system whose base is  $a$ , to find  $\log. \frac{1+n}{1-n}$ .

3. Find the values of  $\log. (1+n)$ ,  $\log. (1-n)$ , and  $\log. \frac{1+n}{1-n}$ , when  $n=1$ .

4. In a table of logarithms it is observed that the difference between the logarithms of contiguous numbers diminishes as the numbers themselves increase. Explain this.

5. Show how to find the number corresponding to a logarithm found only partially in the tables.

6. If  $n$  balls,  $a$ ,  $b$ ,  $c$ ,  $d$ , &c., be thrown promiscuously into a bag,—and two balls be drawn out, show that the probability that these will be  $a$  and  $b$  is  $\frac{2}{n.(n-1)}$ .

7. In an ordinary lottery, show that, *a priori*, the chances are the same, whether a person is to draw first or last or intermediately.

8. Find the probability that some two at least out of three lives will be alive at the end of the  $n$ th year.

9. Show that the probability of a single life failing in any assigned year, as the  $x$ th from the present time, is  $p_{x-1} - p_x$ .

10. Two lives, A and B, being proposed, find the probability that A will die before B.

11. Find the amount in  $n$  years of an annuity certain of  $\pounds a$  at  $i$  per cent. compound interest.